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☞ *See Advertisement on last page.*

TO WHO? TO WHO?

'Twas on a cold autumnal night,
A dismal one to view;
Dark clouds obscured fair Venus' light,
And not a star appeared in sight,
As, the thick forest through,
Muggins—as usual, "blue"—
Beat homeward, "tacking" left and right;
When all at once he "brought up" right
Against an old dead yew,
At which he "rounded to,"
And "squaring off," as if for fight,
Said, with an oath I sha'nt indite,
"——infernal scoundrel, you!
Light, an' I'll lick you, black or white"
Just then above him flew
An owl, which on a branch did 'light,
A few feet o'er the boozy wight,
And then commenced "*Tu whoo—*
Tu-whoot—Tu-whoot--Tu-whoo!"
Quoth Muggins, "Do you think to fright,
A fellow of my weight and height
With your *Tu-whoot-or-whoo,*
You cursed bugaboo!
'An if you're Beelzebub, it's quite
On-necessary you should 'light,
For Muggins aint your 'due.'
My money matters are *all right!*
The printer paid up—honor bright,"
Thereat the owl withdrew,
And Muggins mizzled, too.
But there are other chaps who might
Be caught out late some dismal night,
Who hav'nt paid what's due!
They know *to who—to who!*

THE TROOPS UNDER TAYLOR.

Huzza for the troops under Taylor,
For fighting so willing and well;
They've go ahead notions of valor,
Which few have heads to excel.

The boys of John Bull twice have tried 'em,
And twice they got decently beat;
And Johnny Bull now thinks beside 'em,
There's none quite so hard to defeat.

Arista, the Mexican hero,
With odds two to one in the field,
Old Mexico's best, and Ranchero,
Wer'e forced to cry quarter and yield.

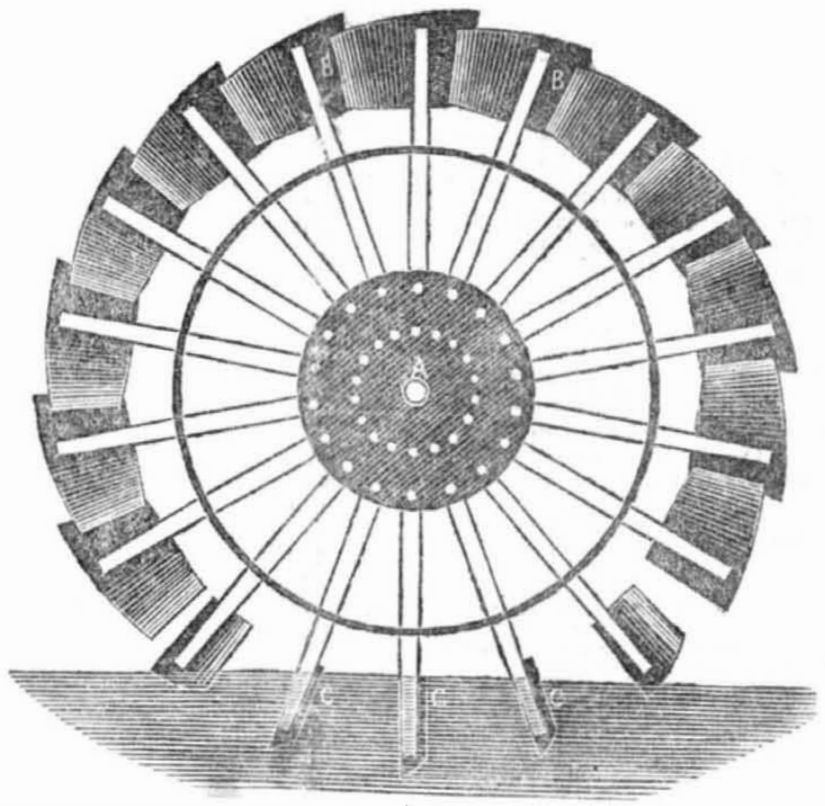
Amoudia, ensconced in a city,
Next gave our brave army a chance;
And, lack-a-day, wasn't it a pity,
To see the poor Mexicans dance.

Though frolicksome chaps, 'tis expected,
They'd not been accustom'd to balls,
Got up, and by Yankees directed,
Before within Monterey's halls.

Huzza for the troops under Taylor,
For fighting so willing and well,
They've go ahead notions of valor,
And spirits, too, onward to quell.

There is an old negro in the Baltimore Prison, who has been a resident of the prison 40 years, and appears well contented.

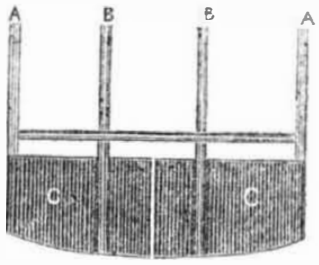
SMITH'S IMPROVED PADDLE WHEEL.---Figure 1.



INTRODUCTION.—Sicne the intruduction of steamboat paddle wheels by Fulton, there have been nearly one hundred different plans invented and proposed for propelling vessels, and among them about thirty differeatly constructed paddle wheels. The main object in most of the various plans has been avoid the vertical resistance encountered by the paddles in entering and leaving the water. But most of these different kinds embraced such complicated mechanism in their construction as to render them too unsafe to be useful.—Other kinds have been constructed with the peculiarities for avoiding atmospherical resistance while passing over the top of the wheel: but they have been subject to too much friction, or liability to be impeded by chips or other floating objects. In the plan here presented, it will be seen that both of these desideratums are accomplished without the principal objections.

EXPLANATION.—Fig. 1, is a side view of the wheel, A being the centre shaft, B and C the paddles. Fig. 2, represents a front section of a pair of arms, paddles and rods Figures 3 and 4 are vertieal sections, representing the different positions of the paddles. Between each pair of arms are two stout iron rods, as shown at B, figures 2, 3 and 4. To the outward end of each rod, is attached an iron plate paddle, &c, (C, fig. 2, &c.) To the

FIG. 2.



centreward end of each rod, near the main shaft, is attached a helical, spiral or other spring which ordinarily holds the rods and the paddles in the position represented in fig. 4: but as these springs admit of a diversity of construction, a minute description is deemed unnecessary. The direction in which the paddles are disposed to move, is shown by the arrow; and when the wheel is in motion, all the paddles retain this relative position, except those which are immersed in the water as shown at C fig. 1, and consequently the atmospheric resistance is measurably avoided. But when the paddles enter the water, the resistance thereof causes them to expand to the right and left, and by the time they arrive at the position at which they are required to meet with the greatest resistance, they are brought to the position shown C C, figures 1, 2 and 3, the ends of the paddles resting against the arms. Again, in leaving the water, before the paddles are fairly out of it, they again change their position, the centreward ends falling back so as to allow the water to escape freely, and without being raised as is the case with the ordinary wheels. Each pair of rods which hold the paddles are supported by a cross bar. centreward of the paddles, and may if occasion requires, have another supporting cross bar connecting the ends of each pair of arms. In either case the mechanism is permanent and not exposed to damage This wheel was invented by Mr. D. G. Smith of Carbondale, Pa., who intends to apply for a patent therefor.

FIG. 3.

FIG. 4.

Waking Sleepers.

It appears from Lewis' History of Lynn, that in the early times of Massachusetts, it was the custom for a person to go about the church to wake the sleepers during divine service. This custom has since been superseded by such improvements in preaching as to either awaken the sleepers, or lull the whole congregation to a perpetual sleep.

Iron in Berkshire.

A company has recently been organized in North Adams, for the manufacture of Cast Iron, several ore beds having been opened at the village, and a furnace erected. On Friday last the first Pig Iron was made. The draft was about thirty-five hundred pounds, and the quality far exceeded the most sanguine expectations of the proprietors.

[In the unaccountable absence of our weekly catalogue of patents, we are induced to supply this column with a few "anecdotes, old, but good as new."]

The Mare.

An alderman by the name of Kirk owned a valuable mare, which was put under the care of an Irish servant. The mare happened to die one day by some violent disease, and the servant immediately informed his mistress.

"Marm, the mare's dead."

"The Mayor dead!" replied the lady; "then I suppose Mr Kirk will be mayor now."

"Indade marm," exclaimed Pat, "it's not the *man* mare, but the *horse* mare that I mane."

The Very One.

A Frenchman who was exhibiting some sacred relics and other curiosities, produced among other things a sword, which he assured his visitors was "de sword dat Baalam had wen he would kill de ass." A spectator remarked that Baalam had no sword, but only wished for one. "Ver well; dis is de one he wish for."

A Dark Rain-Beau.

A lady in Cincinnati was lately caught in an evening shower, when a stranger stepped up and politely tendered her the use of his umbrella, which she accepted. When arrived at her house, and she was about to invite him to walk in, she discovered that he was a *negro.* Compliments were scarce.

The Breadth of the Way.

"My dear, come in and go to bed jist," said his wife to a jolly son of Erin who had jist returned from the fair in a decidedly "how come you so" state. "You must be dretful tired sure, with your long walk of two miles." "Arrah get away with your nonsense," says Pat, "it was'nt the length of the way at all at all that fatagued me, but the *breadth* of it."

Value of Married Men.

"A little more animation, my dear," whispered Lady B. to the gentle Susan, who was walking languidly through a quadrille. "Do leave me to manage my own business, mamma," replied the provident nymph: "I shall not dance my ringlets out of curl for a married man." "Of course not, my love; but I was not aware who your partner was."

A Bar Maid.

A man who was about opening a tavern called on a carpenter, and informed him that he wanted a *handsome bar made,* and inquired if he could accommodate him. As to that replied the carpenter, you can find *bar maids* enough, but I cannot spare one of my gals for you.

Dutch Justice.

"Prisoner," said the Justice, "pe you guilty or not guilty?" "Guilty your worship" "Well, den, I give you six monts in de house of correction. And you tother prisoner, pe you guilty or not guilty?" "Not guilty." "Den vat de duyval you here? Go apout your pusiness. Court is adjourned."

Got or no got.

"I am constrained to call on you this menning," says Tap, "for I owe a hundred dollars at the Bank, which I have got to pay today.' "You have *got* to pay!" replied Sip, "the more lucky for you, *then*; for I owe ten dollars, and hav'nt *got* the first dollar towards it."

Deferred Sensibility.

A client once burst into a flood of tears after he had heard the statement of his counsel, exclaiming, "I did not think I had suffered half so much till I heard it this day."

A man named Joseph *Woodman,* has lately ran away from Milford, Mass. with a young woman by the name of *Tree.* Woodman was pursued, overtaken, and his *Tree* rescued from him.

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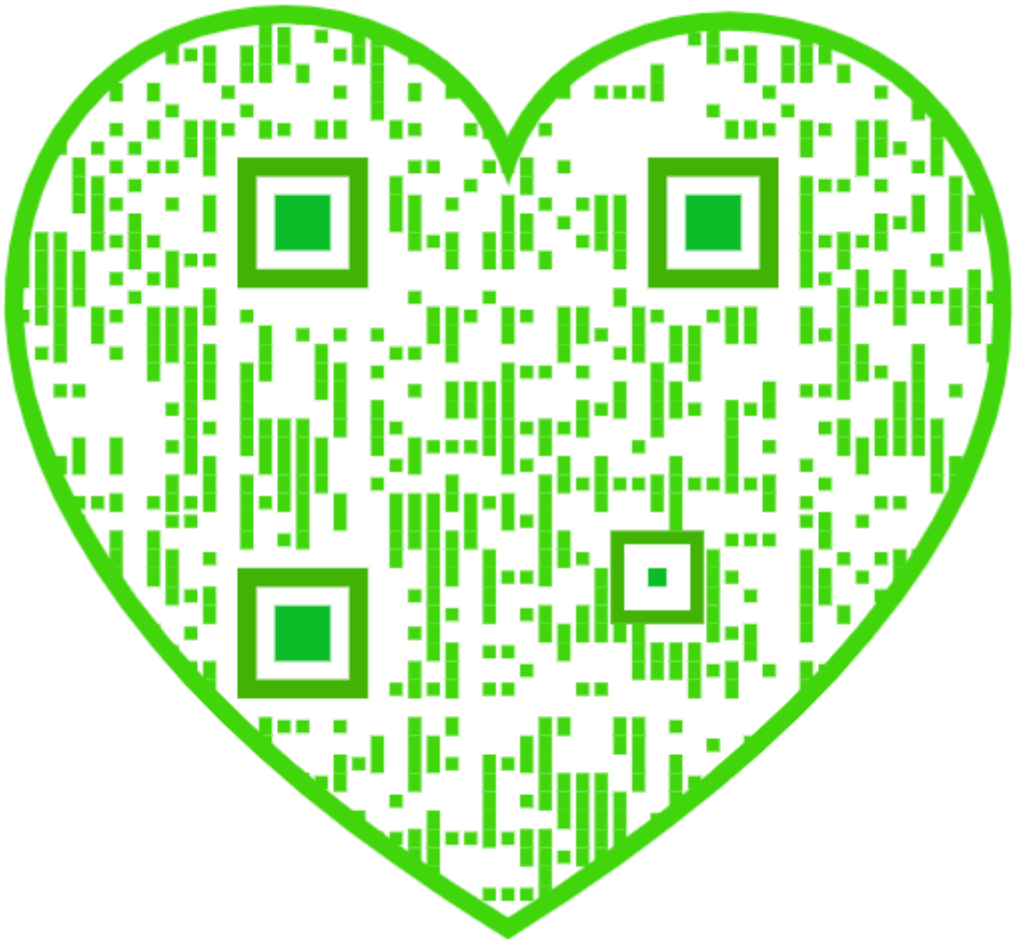

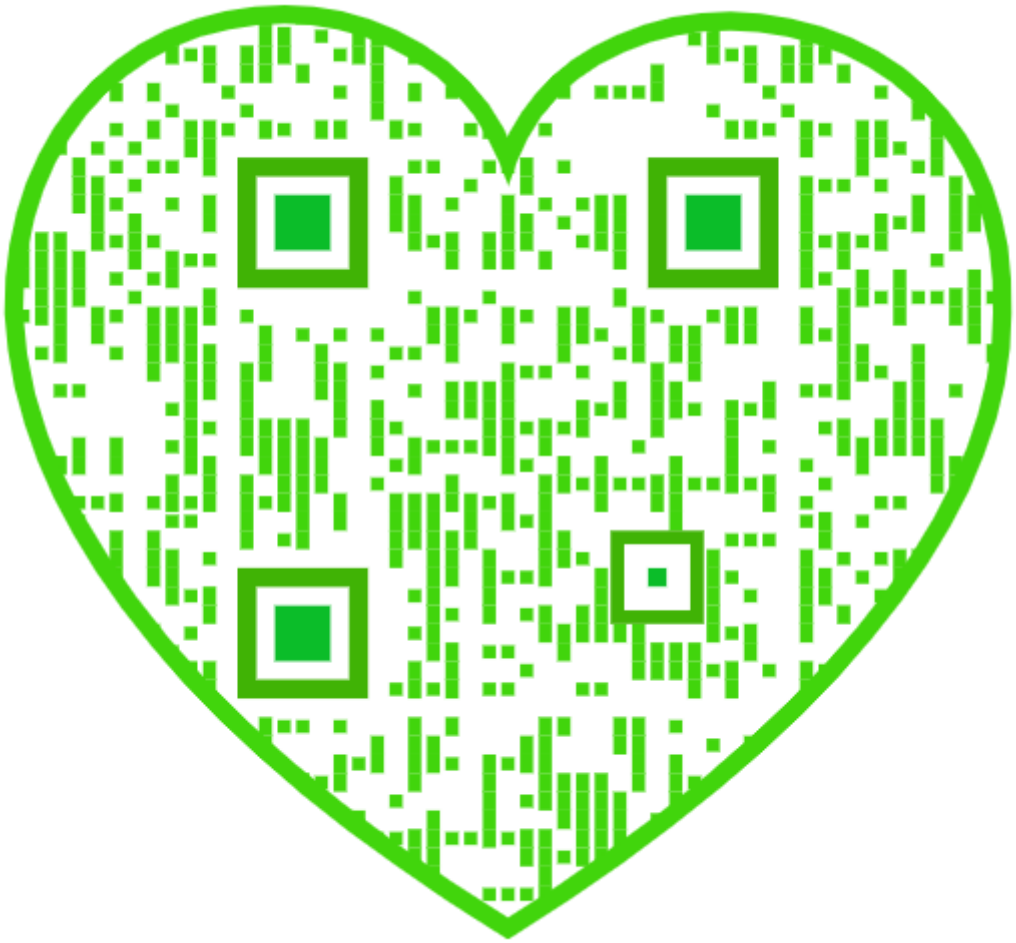

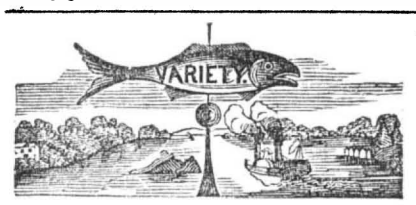

Coincidence of Natural Phenomena.

It has been remarked that the earthquake which was experienced in Scotland Nov. 25, 1846, was conspicuously indicated at the time by the wires &c., on Brooklyn Heights, and was the cause of the storm in which the Atlantic was lost. But it is moreover conjectured that not only tempests and storms, but disasters and causalities, even fires and explosions also occur most generally in connection with the same meteoric phenomena which indicate earthquakes and tempests. This is probably mere conjecture, but further observations on this subject may decide the point as far as facts can decide.

Great Western Railroad.

Dr. H. Carver, has made proposals for constructing a railroad from Lake Michigan to the Pacific Ocean, on a magnificent scale. He proposes that the cars shall be 16 feet wide, and 100 feet long, that they shall contain dining halls, cook shops, state rooms, and shall be to "all intents" *bona fide* hotels, travelling at the rate of 50 miles an hour, which he proposes to accomplish by doubling the diameter of the ordinary wheels, so that at every motion of the crank a double velocity must follow. Nothing in the nature of business is more evident than that the railroads on most of our principal routes, are on a scale too diminutive to satisfy the business requirements for many years to come, and we like to see bold projects of improvements on a large scale, seasonably introduced.

Remarkable Escape.

As the workmen on the Providence Railroad were blasting rocks at Quinsigamond Village, a large piece of rock fell upon the roof of a house occupied by Mr. Burbank, and breaking a rafter, passed through the roof and the garret floor and lodged upon a bed in one of the chambers. It is supposed that the bed alone prevented the farther progress of the rock, and perhaps saved the lives of some of the family who were at breakfast in the room below, and directly beneath the spot occupied by the bed.

New mode of acquiring Wisdom.

Andrew Jackson Davis, who has been "three years engaged as a *subject* of human magnetism and spiritual sympathy," and who is about to publish a book on the subject, states in a recent communication to the "Gem of Science," that he has "never read a book, pamphlet or paper, treating on any *science*, or *theology*." So it seems this gentleman has carefully avoided the Sacred Scriptures and all scientific works, and is seeking the heights of wisdom in mesmeric experience alone.—Truly this *is* a novel system of education.

Storm at New Orleans.

On the 28th ult., the vicinity of New Orleans was visited with such a storm as has seldom if ever been known in that section, and by which six large ships were driven from their moorings and severely damaged. A large house in progress of construction was blown down, and four flat boats, containing about 8500 bbls. of coal, and one flat boat loaded with wood, were sunk, and their cargoes lost. The wharves in front of the Port Market have been seriously damaged; and it will take weeks, if not months, to repair them.

Railroads in New England.

In 1818 there was not a single mile of railway in New England, with the exception of the stone quarries. Now eight hundred and fifteen miles of railroad have their termination in Boston alone.

English Ready Made Clothing.

We observe in some of the advertisements in English newspapers, that "good warm Flushing great coats are offered for 13 shillings a piece; strong lined winter trowsers, for 6s., and good strong double breasted waistcoats for 3s. each,"

New York Railroads.

The Comptroller of this State in his report, gives the following as the earnings of the roads of the State, for the year ending January 1st. 1847.

Mohawk and Hudson	16	$113,857
Utica and Schenectady	78	428,395
Syracuse and Utica	53	257,637
Auburn and Syracuse	26	119,038
Auburn and Rochester	78	290,170
Tonawanda	38	143,818
Athens and Buffalo	31	86,494
Troy and Schenectady	20	36,788
Rensselaer and Saratoga	25	50,534
Cayuga and Susquehannah	—	14,557
Saratoga and Schenectady	22	32,118
New York and Erie	62	185,517
Total	455	$1,758,922

Golden Ink.

We have often heard enquiries for an ink that would write a brilliant gold color on paper; but we have never seen such an article until it was recently invented and manufactured by Davids & Black, 112 John street.—This ink flows freely from the pen, and when dry, shows a brilliant metallic lustre of a gold color, and which remains permanent. Its lustre resembles that of gold leaf, though less brilliant; and is a beautiful article for ornamental writing in albums and fancy work.

A Slave Murder.

A slave was recently arrested for killing another slave, a female at Charleston S. C. but was acquited on the ground that he was but obeying the commands of his mistress. We have long been under the impression, that if their was anything diabolical in the slave system, it was the custom of compelling one slave to whip and torture his fellow slaves, and sometimes his dearest friends.

Great Scales.

Messrs. Elliot and Abbot of Philadelphia, are manufacturing weighing scales of enormous capacity for the use of railroads. One of these scales measures 120 feet in length, and capable of weighing ten loaded cars at a single draft. Its capacity is 200 tons.

A Noble Tree.

A pine tree has recently been cut in Hopkinton, N H. which measured 107 feet in length, and seven feet in diameter. It was estimated that it would furnish 8000 feet of boards. The value of this tree if sound, must have been nearly a hundred dollars.

A Worthy Precedent.

A respectable young gentleman accompanied by his wife recently applied to the Commissioners of the Almshouse, for permission to take charge of the maintainence and education of one of the infant foundlings —The request was readily granted, and we see no reason why the example should not be followed by others with satisfaction to themselves, though this application is esteemed a novelty in the city.

Large Contribution.

At a meeting of the parishoners of the Church of the Holy Cross, at Boston, on Sunday evening, $3000 were subscribed to aid the suffering poor of Ireland.

Florida Cigars.

A Florida paper states that a Mr. Floyd has made 50,000 cigars, equal to Cuba, and worth at least $650, from the planting of an acre of ground. The statement reads very well; and should one of the cotton planters manufacture the produce of an acre into fine printed muslin, it would amount to a much greater sum.

American Produce.

It is estimated that the wheat and corn raised last year in the Western States, was in the aggregate 640,000,000 bushels. In the state of Ohio alone, the quantity of corn is estimated at 60,000,000 bushels. In one county the quantity was 359,335 bushels, and on one farm 50,000.

A Good Second.

During a recent prize fight near Buxton, Eng. the wife of one of the pugilists was present, and between the rounds stepped forward and kissed her husband, who thus encouraged redoubled his combative efforts, and was finally victorious.

The Killers.

Captain Hill of the Philadelphia "Killer" volunteers, finding his company wholly unmanageble, while at New Orleans, gave up his commision; but was persuaded to proceed and present his complaint to Gen. Scott. His rowdy outlaw volunteers may meet rough handling yet.

The Massachusetts Regiment.

Colonel Cushing of the Massachusetts volunteers has presented every soldier in his regiment with a pair of boots, and the ladies of Hewburyport have presented a gold ring to the Col· and three hundred dollars in cash to the soldiers.

Dayton (O.) and Springfield.

The engineers are engaged in surveying the route of a railroad between Dayton and Springfield. It is supposed that the necessary amount of stock will be subscribed in a short time, and the road put under contract in two or three months.

A Dark Valley.

A colporteur reports that there is a settlement among the Alleghany Mountains, containing 60 inhabitants, but in which prior to his arrival, there was neither bible, spelling books, nor page of reading matter of any kind.

Prompt Execution of the Laws.

We learn of the Organ that of the 4000 who are selling liquor in this city without license, one, a poor woman has been arrested. Glory enough for a fortnight.

New Manufactories.

A manufacturing company at Cape Ann, Mass. with a capital of $400,000, and another at Shirley, with a capital of $100,000, have been recently incorporated by the Mascachusetts Legislature.

Self to the last.

Among the names attached to a petition to to the Massachusetts Legislature, against the abolition of capital punishment, were no less than twenty rope makers.

Compound Gin.

A workman in the Brooklyn distillery last week fell into one of the kettles, and his flesh was boiled off from his bones. The gin distilled from the compound will probably be drank by hundreds nevertheless.

Inundations.

During the recent flood in Rome, half of the city is said to have been at one time under water. A great inundation has also occurred in Egypt, by which ninety-three villages were destroyed.

Bagley's Gold Pens at fault.

A cotemporary in speaking of these pens,—using one of them in writing the article,—admits that the pen is not capable of writing a full expression of its *own merits*.

Many of the English clergy, for want of more important business, are deeply engaged in the discussion of the propriety of permitting the marrying of a deceased wife's sister. Flat, very.

The St. Louis Reville notices the marriage of Mr. Schichenhoofen to Miss Schreghengost. The officiating Squire should have been provided with antidote against "cramp in the tongue."

The Belleville Iron Works is the name given to extensive buildings in the course of construction opposite New Orleans. They will it is stated, give employment to three hundred workmen.

In the new city of Lawrence, Mass.—a young babe of a city about six months old,—nine lawyers and twelve physicians have already located.

The bridge for the Northern Railroad across the Connecticut river at Lebanon, is to be built by Mr. Campbell, an eminent engineer of Pennsylvania at the cost of $50,000.

The Hon. Abbott Lawrence has presented the Mechanic Association of the city of Lowell, the sum of one thousand dollar to be appropriated to the purchase of scientific books.

The average cost of railroads in England has been $160,000 dollars per mile, while that of railroads in Ame rica is only $43,650.

Sombody has proposed to connect all the churches in the United States, by telegraphic wires, so that one minister may preach to all the congregations at the same time.

The Brooklyn Eagle notices a new machine for making wood screws, which saves half the cost required to make them by other machinery.

The petitions forwarded to the Assembly from this city, against the beggar making liquor trade, are said to number nearly 50,000 names.

The Legislature of this State have voted 96 to 9, and that of Pennsylvania 79 to 0, against the establishment of Slavery in any newly acquired territory.

Mr. Jones of the Philadelphia Hotel is said to have made $150,000 in ten years. The only sponging in this trade consists in charging 1000 per cent on the cost of entertainment.

Gen. Le Vega has called on Midshipman Rogers, who is a prisoner at Vera Cruz, and promised to aid in obtaining his liberty. He is treated with much kindness.

Of 400 dragoon horses shipped from the United States for Mexico, only about 50 arrived. So writes an officer of the 3d dragoons, from Camp Page.

A regular train of passenger cars left the Preston, (Eng.) station, a few days since, without a single passenger. It is perhaps the only instance of the kind ever heard of.

The Great Gun made in England to replace the peacemaker, is to be put on board the Bomb Ketch to be used at the taking of San Juan.

The Governor of Louisiana has found it requisite to call out the militia to protect the citizens against the outrages of the volunteers encamped in the vicinity.

The St. Louis Republican gives a list of 36 steamboats sunk or destroyed on the Western Rivers in 1846. The aggregate of loss and damage is estimated at $1,000,000.

The Selectmen of Nantucket acknowledge the receipt of seventy thousand dollars by contributions in behalf of the sufferers by the fire which occurred in July.

B. F. Walker, member of the Missouri Legislature, has been expelled from the House of Representatives for publicly insulting a lady in the street.

Some of the Boston papers have been presented as nuisances by the Grand Jury, in consequence of the insertion of scandalous *Restell* advertisements. That is right.

Buffalo, as appears by a recent census, contains nearly 32,000 inhabitants. It is supposed to be nearly 35,000 in the business season.

An old revolutionary soldier died recently at Montgomery, N. J. at the age of 105 years leaving 175 children, grand children, &c.

The Ohio Legislature has by bill, thrown the highways of that state, open to all for the erection of lines of magnetic telegraph.

The Japanese are very temperate, and live to a great age. They neither eat meat, drink wine, or any intoxicating liquor.

A man is under arrest in New Orleans, for hiring a man for ten dollars to assassinate a third.

In Russia the police have forbidden all trade or manufacture of cotton powder, under the ostensible plea that it is a dangerous article.

The first article that appeared in the "Chicago Morning Mail," of the 12th inst. was "a lady's foot." Queer, was'nt it.

One hundred and fifty thousand steerage passengers have arrived at this port since the 1st of March last.

A gang of thirty horse thieves have been arrested and imprisoned in the vicinity of Hancock, Iowa.

Plymouth Rock is said to be the place where the Pilgrims first *rock'd* the cradle of liberty.

The latest news from New York is received at New Orleans by the Philadelphia telegraph.

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GOD IS LOVE.

Yes, God is love ! The trees and flowers,
Which blossom during summer hours,
And fill the air with fragrance sweet,
Where'er we tread our weary feet,
Proclaim there is a God above,
And that His attribute is Love.

The ocean, with its ceaseless roar,
Its blue waves rolling on the shore,
Hides many a gem, and coral cave,
Far, far beneath its bounding wave ;
This tells us—there's a God above,
And that his attribute is love.

The silvery moon, which shines so bright,
To illume the darkness of lhe night,
And every little twinkling star,
Which gleams so brightly from afar,
Declare there is a God above—
And that his attribute is love.

The earth He causes to produce,
All things essential to our use,
Gives us a home wherein to dwell,
And all the friends we love so well ;
Then let us praise the God above,
Whose crowning attribute is love.

The human frame proclaims his skill,
And should our hearts with transport fill—
The strength and powers of human mind
The eye, the ear, and tongue combined,
Teach us there is a God above—
And that his attribute is love.

He viewed us in our lost estate,
Took pity on our hapless fate,
And in His love devised a plan,
To save rebellious, erring man ;
All glory be to God above—
Whose noblest attribute is love.

Yes, Jesus' precious blood was spilt
To atone for wretched sinners' guilt,
And now he ever lives on high,
Pleading their cause unceasingly ;
Then yield your hearts to God above—
Whose greatest attribute is love.

The way to Heaven is free to all,
For rich and poor, for great and small,
Hearken unto the Saviour's voice—
It's without money, without price ;
Oh ! turn and seek the God above,
And learn his attribute is love.

To the Editor of the Scientific American.

Sir,—In your Journal of the 13th inst., I notice some remarks in relation to my meteoric, magnetic and electric wires, and also in reference to my recorded and published observations.

My observations are made and recorded *every hour* during the day, commencing, in winter, at 6 o'clock in the morning and continued until 10 o'clock in the evening—in summer commencing at 4 o'clock in the morning and continued till 10 o'clock in the evening—occasionally, in both winter and summer, continued throughout the entire twenty four hours. During the operation of thunder storms, the observations and records are made every *five* minutes. My place of observation has an altitude of 65 feet above tide water ; is at the southwestern extremity of Long Island, which is 140 miles long, by about 12 to 16 miles wide, extending lengthways in a line running northeast and southwest, and therefore, in the great electric current. The southern shore is washed by the broad Atlantic ocean, and near its northern shore is the continent which extends to the arctic pole. The island is surrounded by salt water. The latitude of my place of observation is 40° 41' 50" North ; longitude 73° 59' 50.' West.

At Saltville, Washington County, Virginia, situate upon the mountains 1782 feet above tide, lat. 36° 22' N., long. 81° 53' 24" W, observations are made and recorded every hour of the day, commencing with 6 o'clock, A M. and continued till 10 or 11 P. M Saltville is 20 miles from the line of the State of Tennessee. Mr. William P. Milnor, who makes and records these observations, transmits to me the records made every month, made out in great detail. That place of observation is at the Virginia Salt Mines.

At Syracuse, Onondaga County, New York, observations are made at sunrise, 9 A.M., 3 and 9 P. M., and occasionally more frequently. Syracuse has an altitude of 400 feet above tide ; is in lat. 43° 1' N, long 76° 15' W. At this place is the very extensive State Salines, at which this year, 3,833,581 bushels of salt have been made by solar and terrestrial evaporation. The observations are made and recorded at Syracuse by S. W. Conkey, and transmitted to me monthly, in great detail.

These three places of observation, have each a *salt water atmosphere*, and the two last named ancient volcanic sites.

I receive several daily newspapers, from the marine accounts in which, I collect particulars of storms at sea, and from numerous other published accounts obtain accounts of storms on the land, which I transcribe in a book under each day's date of observations.

I keep a record of thunder storms and examine all cases of damage by lightning which I hear of, that are near my place of observation. I also keep a record of all the published accounts of earthquakes which come within my reach. Besides these, I have a very extensive correspondence in which I obtain much particular information.

Thus my records for any given day present at one view the observations made and recorded on Brooklyn Heights : at Saltville, and at Syracuse, together with accounts of storms, earthquakes, &c., at other distant places on that day—these records are compiled after a lapse of five months from the close of each month, whereby opportunity is afforded to hear from distant parts of the globe.

I have thus presented you with the ground work of this arrangement and will as early as practicable present you with details of observations coupled with my remarks thereon.

It is from carefully made and regularly recorded observations that we are to accumulate facts and if these are made and published regularly, the reader will be able to form an opinion of the advantages they afford.

It is a remarkable fact and one that requires investigation that steamers that float upon the water under a great head of steam, are greatly offected by distant earthquakes. The steamer Swallow stranded on a rock at Athens, in the Hudson, on the 7th of April, 1845, was during the existence of an earthquake at Mexico.

The steamer Great Western was periled in a storm on the 19th, 20th, and 21st of September 1846, produced by an earthquake at Cape Hatien, on the 15th, and the iron steamer Great Britain run upon the rocks in Dundrum Bay on the 22d of September during a lightning storm of the same parentage

The steamer Atlantic was stranded on the rock in Long Island Sound during a storm on the 26th of November, 1846, which succeeded an earthquake in Scotland, the day previous.

The packet ship Thos. P. Cope was burnt by lightning mixed with snow on the 29th of Nov. 1846 produced by an earthquake at Porto Rico the day previous.

The steamer Sivius was wrecked upon the rocks of the Irish Coast on the 15th of January 1847, and the same day the steamer Spynx of 1080 tons, burthen and 500 horse power, was wrecked on a reef of rocks off the Isle of Wight The earthquake at Rice Lake, Upper Canada, was on the 14th of January the day previous.

These facts speak for themselves—I am inclined to think that a vessel holding much iron suspended in a dense fluid, with a fluid less dense resting upon it, and propelled by steam is subject to influences during the existence of distant earthquakes that is both extensive and hazardous.

The reader will readily perceive that my records, made hourly, contrast widely with those made three or four times in twenty-four hours.

I give you my record of the atmosphere yesterday.

Monday Feb. 15, 1847.—Magnetic meteoric and Eelectric wires—1 o'clock A. M. 47. 2 & 3 same clear star light—; 4, 48, cloudy ; 5, 49 ; 6, 49 1-2 ; 7, same ; 8, 50 ; 9, 50 1-2 ; 10, 53 ; 11, 54 1-2 ; 12 to 1, 55 1-2 ; 2, 47 1-2; 3, 57 ; 4, 56 ; 5, 53 ; 6, 52 1-2 ; 7, 51 ; 8, 50 ; 9, 47 ; 10, 46 ; 11, 45 ; at which it continued all the residue of the night and is at the same point at 8 o'clock this Tuesday morning with a snow storm in the high atmosphere.

Monday Feb. 15, Thermometer 1 A. M. 29. 2 & 3 o'clock the same ; 4, 30 ; 5, 31 ; 6, 32 ; 7, 32 1-2 ; 8, 33 ; 9, 34 1-2 ; 10, 36 ; 11, 41 1-2 12, 42 1-2 ; 1, 44 ; 2, 46 1-2 ; 3, 47 1-2 ; 4, 47 1-2 ; 5, 46 1-2 ; 6, 44 1-2 ; 7, 42 1-2 ; 8, 41 ; 9, 38 ; 10, 36 ; 11, 35 ; and this morning at 8 is at 25—having fallen 10 degrees the last nine hours while the M. M. & E. wires remained in equilibrium. This state of the wires has heretofore been produced by distant terrestial and aerial disturbances.

E. MERIAM.

Brooklyn Heights, Feb. 16, 1847.

Do not Risk.

It is perfectly rational and consistent with business transactions, to venture a small risk against a greater prospect of gain. The farmer who sows and plants various seeds in the spring, is aware of the possibility of losing both the seed and his labor ; but the prospect of a harvest preponderates in his mind over the apprehension of loss. With the merchant the risk is much gretaer and more conspicous; but he judiciously weighs this risk against the prospect of gain, and decides accordingly ;—for he reasons very properly that if his cargo is lost, or the enterprise fails it will not ruin him ; and if it succeeds it will perhaps double the cost. Yet some there are who have such a dread of losses that they can not be persuaded to run any risk, but are careful to get all their property amply insured. Some of these cautious persons are members of churches, and profess to believe what is written in the scriptures concerning a future and eternal state of immortality—everlasting happiness and everlasting pain. Ask one of them if he is sure of salvation ? He will probably say, if he answers honestly, " I *trust* I shall be saved ; I think I have a fair prospect of it." But have you a positive assurance, and certainty beyond all possibility of doubt that your salvation is secure ? "Well, I don't feel much anxiety on that subject." But do you think there is so much as one chance in ten thousand that by some mistake or neglect, you may yet be disappointed in the decision of the Judge at the last day ? "O, as to a definite chance, I suppose I must admit that there is a possibility of such a thing ; but 9999 chances in ten thousand is a pretty safe prospect : I don't think there are many who have a more perfect prospect than that." That may be ; but pray inform me at what value in dollars and cents, you would estimate the one ten thousandth part of this expected salvation ; for there must be a specific value to every prospect and every risk according to its proportion to the whole. If you will name the value at which you prize the whole amount, we can readily calculate the value of the fraction. " The value of my eternal salvation ! why its value is infinite :—above all computation. Ten thousand worlds would not balance its value." Very well ; then you admit that this small chance of one in ten thousand is of itself worth all this world at least. Now, sir, it *is* possible, as you cannot deny, to secure to an *absolute certainty* of this greatprize ; what therefor can you do better, in the way of business, than to secure this *world's worth*,—this other chance of eternal salvation ? Even the risk you would incur in neglecting it a single day —a single hour, according to your own admission, would be worth more than you expect to gain by other business in five years."

Perhaps this imaginary conversation may lead some reader to reflect on the immense and indefinable importance of the risk and danger of one hour's delay.

Nonsencical.

It is vociferously intimated by the silence of a blank newspaper, in glaring capitals. that seven rods of a new rail fence were dangerously poisoned by the accidental discharge of a basket of cotton bagging which had been used by an eminent lawyer in making out a case of knives and forks on the occasion of the final removal of the two principal heads of the Mississippi river, during the week ending on the 35th inst.

" Sir, you are a fool !" " Do you call me a fool ?" " Yes, sir !" " You do, sir ?" " Yes, sir—I would call any man a fool, who behaves as you do !" " O ! you would call any man a fool. Then I cannot consider it personal. I wish you good morning, sir."

Philadelphia, Feb. 13, 1847.

Mr. Editor.

Dear Sir.—It is very rational to attribute the paralization of the vital action, in cases of death by fright, to the sudden presence of an unexpected body ; but this law will not govern the case of Captain Downie, in the article entitled "Wind of a Ball," which appears in this day's number, (21) of the Scientific American, (unless the momentum of the ball was well nigh expended, and its velocity reduced to such a degree whereby it was perceptible to him) on account of this fact, viz : that a projectile is not visible to those whom it passes. From the tenor of your remarks appended to the above mentioned artrcle I cannot conclude that the law which you advance is intended as a positive or remediable answer for the mysterious death you knowing the aforegoing fact. Please give a satisfactory solution to the query if you think proper in the valuable Scientific American. Yours, &c.,

A. G. S.

Answer.—We did not intend to be understood to intimate that the officer *saw* the ball approaching ; but that feeling the violent concussion of the recoil, and rushing eddy of air, —affecting probably his lungs if in the act of inhaling —he thought himself struck by the ball. If the ball, however may be supposed to have come into actual contact, even with his finger, or his sword, the accumulated electricity of the ball, would have been sufficient to destroy his life by the electric shock.—Ep

More about the Famine.

A Liverpool paper states that the arrivals at that port of the starving Irish exceeds 1000 a day ; mostly women and children. In Ireland the poor-law guardians have been compelled to close the doors of the workhouses, and in their own words, to "adopt the awful alternative of excluding hundreds of diseased and starving creatures who are daily seeking for admission." Two hundred and sixty have died in three months in one house. It is found impossible to provide coffins for the dead ; and the bodies are thrown into the pits without any other covering than the rags they wore when they lived. 400,000 men gladly accepted employment at 10d per day, with which many support families, notwithstanding the high price of provisions. 140 died in Skibbereen workhouse in one month. In the parish of Cong 27 deaths occurred in one weeks The poor mother of five children sent them almost lifeless from hunger, to bed ; and despairing of ever seeing them again alive, she took her last leave of them. In the morning her first act was to touch their lips with her hand, to see if the breath of life yet remained ; but the poor mother's fears were not groundless, for not a breath could she feel from some of her dear little children. Nearly $300,000 have been raised by an association in London for the relief of the sufferers in Ireland and Scotland ; —the Queen contributing about $10,000. But so numerous are the sufferers that these efforts can only afford relief for a day.

The European Times says, "the whole of the available British navy will be occupied in bringing food from every quarter of the globe where it can be had, to arrest the starvation of which Ireland is the scene.

Wonderful Explosion.

Both boilers of the steamer Tuscaloosa, of New Orleans recently exploded, together with 50 kegs of gunpowder in her hold, shattering the boat, and throwing passengers and fragments in all directions, and at the same moment a peal of electric thunder rent the air — About 50 lives were instantly destroyed, and several bodies torn to fragments. It appears probable that a shaft of lightning produced the explosion, although the surviving passengers were not fully sensible of it at the moment.

A quaint English writer, illustrates a Canada winter by representing that it requires three thermometers to tell when the tea-kettle boils.

The Hutchinsons are singing to crowded houses at Nashua and Nashville, N. H. They're resolved they "will be free."

The bank of France has raised its rate of discount to five per cent, and has borrowed twenty millions of francs from the bank of England.

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NEW INVENTIONS.

Improved Battery.

We learn from the Rochester papers, that Mr. S. B. Swan, of that city, has discovered a new solution, or exciting liquid, for the Galvanic Battery, which promises to be of great utility to Telegraph Companies, as it is a saving of seventy five per cent. in the materials employed, besides a large amount of labor and attention. The improvement consists in furnishing an exciting liquid, which produces an electric and galvanic current of uniform power and intensity, without the rapid decomposition of the metals and acids heretofore supposed unavoidable. The solution discovered by Mr. S. does not act chemically on the mercurial amalgam, and with such trifling action on the zinc as to be scarcely perceptible. Mr. Barnes (the telegraph operator at that station) has used this solution for forty five days, without alteration, no fresh amalgam or acids having been required (except to supply the ordinary evaporation,) and without any perceptive destruction of mercury or zinc; during which time the battery has been in constant and efficient action! We shall procure, and publish further intelligence on this subject in a few days.

Microscopic Daguerreotypes.

We learn from an exchange paper, but without an specification of time or place, that a combination of the Daguerreotype and the Microscope has recently been invented, by which impressions are taken in a magnified state. With a compound microscope a spider's claw measuring by the micronometer 1-60 of an inch in its longest dimension, was transferred to a plate a beautfully defined figure, magnified 75 diameters, or superficially 5,625 times. Several other objects have been tried with equal success.

Improved Road-Rail.

Mr. T. Grinnel, of Newark, N. J., has invented a double faced rail, with an entirely new method of permanently securing the same to the string pieces. The saddle or strap by which the rail is secured, is attached to the timber by screw bolts instead of common spikes. This is an excellent mode, and we are glad to see it about to be introduced.

Improved Corn Sheller.

An article is going the rounds, from a St. Louis paper, describing a new corn shelling machine, which being worked by three men, will shell 300 bushels of corn a day; and *may* be made to cleanse the corn from its chaff at the same time. That is doing very well; but we happen to know of a corn sheller recently invented by a mechanical farmer in Orange Co. in this state, that will with the aid of *two* men shell 300 bushels per day and cleanse it perfectly, and if required, deposite it in bags at the same time. We have arrangements in progress for presenting in our columns, a full description with an engraving of this truly excellent invention. We expect to receive the model within a week.

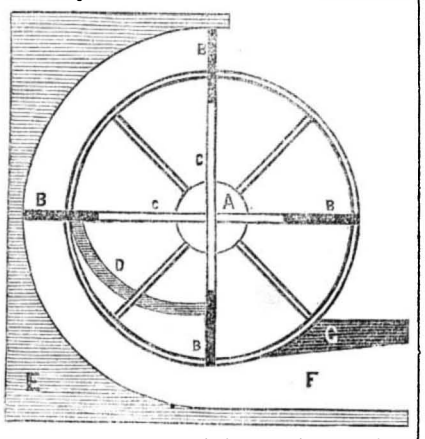
Railroad Alarm.

Mr. S. C. Blodgett, of Newburyport, Mass., has recently invented an apparatus, called the "Railroad Alarm," the operation of which is the ringing of a bell, hung at the crossings, and put in motion by the approaching train.—An experiment with this new alarm has been tried on the Eastern Railroad, and proved highly successful. This is probably effected by means of a long wire in each direction, which communicates between the bell and a series of keys, which projecting upward from the track are operated by the engine and cars in their approach. Perhaps it would be an additional improvement to have swing gates mounted at each crossing, to be swung across the carriage road on the approach of a train, and returned across the track when the train has passed, and that without attendance. Think of that, Mr. Blodget.

New Ventilating Apparatus.

We are informed that Mr. Frederick Emerson, of Boston, has invented an apparatus, which will apparently give an uniform direction to a current of air, either inward or outward, upward or downward, as desired. He has discovered two ventilators, one of which by being applied to the end of a tube and exposed to the outward air, will cause, uniformly a descending or inward current, and the other, an ascending or outward current of air; and this, too, whatever may be the force or direction of the wind. Mr. Emerson believes that with this simple apparatus, he can ventilate a ships hold, from stem to stern, even down to the kileon; and thus remove the noxioes gases which often generate in the course of loug voyages. We have not seen the peculiar construction of this apparatus, though we have seen some other plans for the same purpose.

Guy's Horizontal Water-wheel.



EXPLANATION.—This is a vertical, sectional view of a horizontal, projecting-float water-wheel, recently invented by Mr. George Gay, Jr. of Westford, N. Y. It is sufficiently simple in its construction, and if not impeded by too much friction, will work very economically and give a large portion of the available power of the water. The body of the wheel consists of a drum or cylinder, the periphery of which is connected by four arms to the vertical centre shaft A. Through the periphery are four slots to accommodate four projecting floats B B; and each pair of opposite floats are connected to each other by a connecting bar C. C. These bars pass freely through the centre shaft, one above the other. D is a stationary curved cleat attached to the ground or bed piece, and each float has a small shoulder or projection on its under side, which in the progress of the float, comes in contact with the curved cleat, and is thereby projected outward till the blade of the float fills the semicircular channel F B B. The water is admitted at F, and the channel being encased or closed above and below, the water cannot escape but by the motion of the wheel, which is thus arbitrarily propelled as fast as the water which drives it. The water thus acting by the force of pressure by the floats, the whole power of the water, minus leakage and friction, is applied to the connected mill or machinery. E shows the casing which supports the outside of the channel, and G is a thick plank constituting the wheel side of the penstock or shute. The cleat extends one fourth of a circle, so that each float will fill the channel before the preceding float leaves it. The inventor intends to secure a patent for the invention.

A Curious Cannon.

A new cannon has recently been invented by a Mr. Detheredge, of a novel and convenient construction for being carried by hand or on horseback over mountains forests, or marshes, where an ordinary cannon would be altogether useless. The cannon consists of staves, hoops and screws, all made of wrought iron and nicely finished; and while it is stronger than common cast iron cannon, it can readily be dissected, and each section may be shouldered by either pedesterian or equestrian artillerists, and when required, the parts may be put together and secured ready for action in ten minutes. We have heretofore demonstrated that this is the true principle of the construction of large guns; but whether Mr. Detheredge has completed a corresponding dissecting carriage, wheels &c, we are not particularly informed.

Proposed Water Wheel.

A correspondent of the Scientific American proposes a drum, with moveable clans, or buckets, and enquires whether a patent could be obtained. The editor advises the inventor to "go ahead."

It might save them useless trouble to state that a model of that plan was placed in the Patent Office, three years since, and a patent refused for want of Novelty. We agree that such a wheel would have high power. If made with care, it would render effective from 75 to 85 per cent of the whole water.—*Ann Arbor Tocsin.*

We are well aware that the general principles of this wheel have been known for years; but the invention alluded to embraces several peculiarities of construction which are new and would sustain a valid patent.—ED.

Americans in Russia.

The following extract of a letter from a Philadelphia engineer, now in Russia, and who is a machinist of ability and repute, is going the rounds of the press, and we give place to it as containing matters interesting to our readers. It is dated Herald Mechanical Works, Alexanderoffsky, Russia, Nov. 4.

"In the beginning of our operation here, we had much very much to do, in organising this mammoth establishment. We found it greatly in decay and confusion; so much so, that we abandoned all the old tools, and fitted up the establishment anew. We were looked upon by many as wild adventurers, and that we had undertaken to do a vast deal more work than it was possible to do in the time allotted; but at the expiration of our second year, they became convinced "that some things could be done as well as others," and the present it is only requisite for us to say a thing can be done and all hands knock under. We shall finish this year or the begining of next the full complement of trucks, (5300,) and in all of next year, (1847) the 162 locomotives will be finished. We are now driving on with such speed, that we feel no hesitation in duplicating our first orders in 1850. We have limited the number of engines to be out six a month to prevent running out of materials. We have turned out nine a month, and the numbet for the last six months is 65. In our car shops we are getting on finely; we have delivered to the government 200 platform cars, and 300 box cars, and are now finishing five box cars every day—they are large, eight wheeled cars, 30 feet long. We have not yet commenced on the passenger cars, but have completed the building of a shop for that purpose. The building is 375 feet long by 60 wide, and divided into three apartments, the first for preparing the work, the second for erecting, the third for painting. The number of cars that we have to make is 2000 box, 580 platform, and 70 passenger cars—making the complement of the 5,300 trucks in the first order.—Independently of these, we have taken an order for two imperial cars, 70 feet long, to be placed on 16 wheels. We are to receive for these cars, 11,600 rubles of silver each, or $8,625, without chairs, sofas, or inside trimming. We have undertaken, and now have nearly completed, about 20 miles of the railroad. This we undertook more for our accommodation than profit, so as to have a portion of the road to operate upon. We have declined making the rest of the road, as it would interfere with our present business.

"We do considerable transient work, and could have much more if we chose to take it. We are now making 7 stationary engines for the interior, and have on hand several heavy orders for bolts and nuts for bridges on the line. This has been a very busy year for me, and our imports have been very heavy, amounting to over a half a million of dollars. The number of vessels we have received this year is 85, and there are several more yet to arrive. We have had at times this summer, nearly 3000 men employed, which, together with the foreign business has given the mercantile department much to do, and to prevent errors occurring, I have been constantly on the alert. All the business with the government has to be transacted by writing.

Plank Roads in New York.

The stock is all subscribed for the Rome and Oswego Plank Road, and the work is to be commenced immediately. Petitions are before the Legislature for plank roads from Rochester to Greece, to Churchville, to West Henrietta, and to Brighton.

Fifteen thousand tons of rails have been contracted for, at the iron manufactories of Ireland, for the new railroads at New South Wales. The South Waleans will think that Ireland means *Ironland*.

American Locomotives in England.

An American gentleman writing from Enggland mentions the following interesting incident.

"Finding letters here which required me to go to Bristol, I took an omnibus for the railway station from which started the train for Gloucester, distance 53 miles, fare fourteen shillings, time an hour and forty minutes. Having a little time to spare before the train set off, I went forward to see the locomotive, and was surprised to see on it, in large gilt letters "Philadelphia;" and on another "New York." This induced me to ask the engineer if they were American make, informing him that I was an American, and going in the train. He said they were made in Philadelphia by Mr. Norris, that 18 had come out, and fine little *Yankee horses* they were—could beat the London train, give them the start of a mile, and then pass them with ease. The driving wheels of the English locomotives are 5 1-2 feet in diameter—those of the American were but three feet, and I mentioned it to the engineer."

"Ah, never mind that," he replied "you will soon see how she streaks it."

The Correspondent at the striking of the bell took his seat with a gentleman and two young ladies, his daughters to whom he was introduced, and while progressing with almost lightning speed, engaged in familiar conversation, the Englishman placed his hand upon his knee, and asked with a smile if they could travel with such speed in America, and finishied by observing in an amusing manner.

"England, England, before all the world, for locomotives and railroads."

"Bless me," exclaimed one of the daughters we shall most certainly all be killed, if we go so fast; do, father, speak to the agent and—"

"Killed indeed," quickly observed the father, with a loud laugh of seeming exultation. "English locomotives are like English blood-horses, when once warm there is no stopping them; what say you, my friend?" again squeezing his hand with a knowing inquisitive look.

"Only, my dear sir. that the locomotive now drawing us at such a fearful speed was built in the United States!—that is all," replied he bowing to the ladies.

A loud laugh from the Yorkshireman and his daughters followed the remark.

"Well said, well said—a good joke indeed! An American locomotive on an English railway, ha, ha, ha! But, my dear sir, excuse me," continued the gentleman, "but I cannot help laughing to see you look so very sedate, as if you really mean what you have said."

"I do mean it, my dear sir," he replied, "and will repeat the assertion, and our arrival at the station at Glouster, will also convince you of a fact, which you seem to doubt, and treat with ridicule."

The writer observes, "The whistle from the engine at the moment sounded, and the next minute we were at the station. After handing the ladies out, I observed to the father, smiling if he would accompany me, I would convince him of the truth of my assertion. The daughters also joined us to see if there was no mistake, and the passengers, hearing what had been asserted, followed also, as unbelievers."

There stood the little puffing *Yankee iron horse* with its keeper along side, and the blazing letters "Philadelphia."

All seemed astonished, and many inquiries were made of the agent, who observing their surprise, said, with a laugh:—

"Why, the company sent over to America for twenty at one order; we have a dozen on the road and hope soon to have such fine little fellows on all the roads in England, for they go ahead and no mistake, like those who made them.

A Ground-less Project.

A Washington writer reports that a memorial has been presented to Congress from a Cincinnati editor to invest him with power to form a company to extend the magnetic telegraph *across the Atlantic Ocean!*

We do not understand what *power* was expected to be gained from Congress; but if *permission* or *authority* is only required, we could have conferred that ourselves probably as well as Congress.

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NEW YORK, FEBRUARY 20, 1847.

The Magnetic Telegraph.

It has been by many recommended that Government should purchase the exclusive right of the Magnetic Telegraph, thus monopolising the right of all telegraphic communication; and in view of *some* advantages to be derived from such an arrangement, we have felt inclined to favor it: but in view of the rapid extension of lines in various directions by individual enterprise, we are led to consider in a more serious light, many objections to having the excellent facilities of telegraphic communications, controlled by, and dependent on a party favoring Secretary or Commissioner. It is true that a considerable portion of the business of the post office department is likely to be superseded by the increasing facilities of telegraphing: but then the public will be incomparably better accommodated under a system of competition, than with a government monopoly. For example, supposing the telegraph system to be under the control of government, if a branch line is wanted to be extended to a village at a short distance from a main line, a similar obsequious and tedious process must be performed to obtain the privilege, that is required now to procure the establishment of a new mail route; and to every such branch line the deputy agent at the junction of the proposed branch with the main line, will be very likely to be opposed. We have already an example in the case of the Washington and Baltimore lines, to show that under the special control of government, favorites with extravagant salaries will be employed as superintendents, though perhaps less capable and attentive than others who might be employed by private companies at one fourth the amount of salary. Moreover, the nature of the telegraph system is such as to require frequent extra exertion in forwarding messages to individuals, whether a ready and ample compensation was certain or otherwise; and this would be done, under a competition system, in view of the popularity of the line: but under a general Government system, the agents or superintendents would feel and act more independently of any consideration but that of their responsibility to the department. And even the general system of management under acts of Congress and instructions from the Post Master General or other head of department, would not, in any probability, be so judicious, and consistent with the productiveness of the establishment and accommodation of the public, as under the control of men of more experience and consequently better judgment, in practical business operations: for a man must be blind indeed, who cannot see that members of Congress—a body composed principally of lawyers,—have less knowledge of the ordinary business operations and requirements of the community, than a great majority of their constituents. Another consideration to be examined is the probability that the government would be inclined to restrict the telegraphic facilities in favor of the Post Office and mail operations, by the same rule that our State Legislature has cramped and restricted railroad facilities to favor the more expensive and tardy operations of the Canals. Government may, if it pleases, impose a tax on such telegraphic communications, (or on those uttered verbally) as might be construed to be "mailable matter," but the effect of such an act would be in a great measure proportionate to public sentiment with regard to the constitutionality thereof; but intelligence, like water, will constantly tend to flow in its most convenient channels.

General Taylor for President.

Many members of Congress present the name of Zachary Taylor for President of the United States Should he be wronged in any way by the administration, he may stand some chance of election; —but not otherwise.

The Plainfield Bank.

About the time that our last paper went to press, the New Jersey Legislature, from motives which have not been made apparent, all of a sudden passed a law forbidding the redemption of the Plainfield Bank notes, either by the bank or its agents: and forthwith a band of receivers authorized by the Legislature, proceeded at midnight, in true inquisitorial style, and seized on all the specie and assets of the bank, thus arbitrarily producing a temporary suspension in the redemption of the said notes, though it seems to be the prevailing opinion that this bank was the soundest and safest of any in New Jersey. One of the city dailies, which is itself a rank but clumsily executed counterfeit of the New York Sun, having been indefatigable in its efforts to injure the credit of the Plainfield Bank, and had no small share in inducing by its influence the singular movement, also persisted for 2 or 3 days in its utmost endeavors to instigate our citizens to some act of violence against the agency office of the bank, in this city; but there proved to be too much intelligence as well as common sense in the city to sustain much excitement on the occasion. We have conversed with several persons who hold various notes of the Plainfield Bank, but have discovered not the least disposition to dispose of them much below their regular par value.—The former agents of the Bank, Messrs. M. Y. Beach & Sons, although thus unceremoniously robbed by the New Jersey Legislature, seem anxious that no delay or loss to bill holders, should occur. They have repeatedly offered and requested the N. J. Legislature to permit them to redeem the bills, which they pledge themselves to do at once, paying dollar for dollar. But that august body have not as yet, seen fit to grant them permission.

Inventors' Institute.

We are truly gratified to announce that such an institution as is needed and desired by thousands of the inventors of mechanical and other improvements, is about to become a reality.—A large mechanical establishment, in a very choice location, has already been procured and furnished with power for the use of this institute, and several excellent newly invented machines, as well as a machine shop are in operation. The establishment is to be furnished with all the requisite apparatus for perfecting and proving new inventions, and for the exclusive benefit of inventors, especially such as require aid in bringing their inventions into successful operation. A general invitation will be given to all inventors to become members of the Institute, and share its benefits.—Dr. Solomon Andrews, a popular and successful inventor, is one of the leading movers in this important public enterprise, and a full explanation of the plan and principles of the institution is now in the hands of the printer, and will shortly appear in pamphlet form for circulation, when we shall give further notice and explanation. If we are not deceived in the general character of American Inventors, this institute will soon number *thousands* of those mainsprings of enterprise and national prosperity.

New York Mechanic.

We have become acquainted with several instances in which papers have been addressed to the "New York Mechanic" or "Scientific Mechanic" instead of "Scientific American;" and such papers are likely to find their way to the office of the "New York Farmer and Mechanic," a very different sort of a paper. We are therefore induced to beg the favor of our exchange cotemporaries, that they will give notice that the former editor and publisher of the "New York Mechanic," is the present editor of the "Scientific American."

Executive Patronage.

Some people are opposed to the raising of the proposed ten new regiments, on the ground that it will give occasion for the appointment by the President of 400 additional officers. It is supposed, of course, that he will in these appointments prefer those of his own political sentiments; and the opponents should recollect that these 400 votes are not only to be sent out of the vicinity of ballot boxes, but will many of them, ultimately be lost to the party.

Great Pacific Railroad.

The route proposed by Mr. Whitney for his railroad proceeds from Lake Michigan, across the Mississippi above the mouth of the Wisconsin, thence across the Missouri above the mouth of the Great Platte, between the Council Bluffs and the Great Bend a little below lat. 43, and thence to the Great South Pass, about lat, 42 30, and thence along the Valley of Lewis' river, which is the southern main branch of the Columbia, to the head of ship navigation upon the latter, or to the bay of St. Francisco, as may be hereafter decided. Taking the Great South Pass as a point of departure eastward and westward; our first object is to ascertain the respective distances and elevations. According to Col. Fremont, quoted in the report of Senator Breese, the elevation of the highest point in this Pass, adove the Gulf of Mexico, is 7490 feet. Col. Fremont, who explored the valley of the Great Platte, from its mouth to this pass', in 1842, describes it as an open Prairie region, with an ascent almost or quite imperceptible by the traveller. He was accompanied by a Mr. Carson, who had resided in that region for 17 years, who had frequently crossed the pass, and was thoroughly acquainted with the route. Yet, with all his experience he was obliged to watch very closely, to ascertain when he had reached the culminating point of the Pass through the Rocky mountains. The distance of the Great Pass to the mouth of the Kansas, is 962 miles, and from the mouth of the Platte, 882, the latter being about 300 miles on the Missuri than the former; and as the mouth of the Kansas is 700 feet above the Gulf of Mexico, and that of the Platte a trifle more, the average ascent from either point to the Pass, is only about 7 feet to a mile Andlas the distance from Lake Michigan to the Pass is 1400 miles, and that between the lake and the mouth of the Kansas or Platte a level country, the average ascent from the lake to the pass does not exceed 4 1-2 feet to the mile. According to Col. Fremont, the mouth of the Kansas is 700 feet above the Gulf; the crossing of the Republican Fork, 516 miles farther, is 2300 feet giving an ascent of 4 2-3 feet to the mile; the ascent of the next 128 miles is 1000 feet, or about 8 to the mile; that of the next 107 miles, to St. Vrain's Fort, is 1000 feet, or 9 to the mile; that of the next 80, is 1300 feet, or 16 to the mile; that of the next 18 miles is 806 feet, or about 42 to the mile; that of the next 87 is 200 feet, or 2 1-4 to the mile.

Distress in Ireland.

Rev. Mr. Begley recently stated in a public assembly, that of forty eight deaths that had occurred in one parish in one week, it was his conviction that thirty had died by starvation. Another gentlemen said, "I know many families obliged to go to bed for two successive nights without tasting a morsel of food, and I know that not many days since, Tim McCarthy, on the Strand, and his family, for 48 hours had not eaten a morsel of food, but, as they said themselves, they drank the cold, black water; and when some charitable hand reached some assistance, two of the children fainted on tasting the food." A miserable looking man, standing some distance from the speaker, here exclaimed: "I am McCarthy, and I can prove the truth of that." It is difficult to avoid the reflection in connection with these facts, that they occur in a country whose Queen is furnished with $3,000,000 per annum, and in which many of the ecclesiastical dignities are paid $50,000 each per annum.

The Le Verrier Planet.

It appears by late discoveries that this planet is continually approaching the earth. When first discovered, it was with difficulty seen by the aid of the most powerful telescope; but it is now nearly visible to the naked eye. It is said to travel at the rate of a million and a half of miles in twenty four hours, and as it is believed by some to partake of the nature of a comet, some philosophers apprehend serious results from its approach. The most learned professors in England and France are anxiously endeavoring to solve the mysterious problem. We have heard the opinion of one astronomer expressed, that the planet in question is a *new creation*, which has not had a place in any system until recently.

The Anglo Sacsun.

This is the title of a paper recently started in Boston for the purpose of advocating and promulgating a new system of orthography called the "Phonotypic" printing. We have freely advocated phonography; but phonotypy, in the style now attempted to be introduced, we cannot fully approve. The paper is printed with a mixture of the ordinary Roman characters and newly invented characters, more uncouth and difficult of formation than those of the Cherokee language. But what we should most complain of, is the astonishingly injudicious arrangement and application of the new characters, and new formation of words. In some instances the orthography is even less simple than the ordinary, as is the case in their own title,—"Sacsun," instead of "Saxon." We cannot fully illustrate these objectionables without the use of some of the phonotypic characters; but would simply allude to two or three inconsistencies which first meet our eye. The word "payable," is spelt "paubl,"—that is, expressing the long sound of *a* and the short sound of *u*. The omission of the *e* after *l*, is perfectly rational; but we observe that words terminating in *r*, as in "augur, wintur," &c., instead of omitting the last vowel in behalf of the *r*, which is of itself properly a vowel, these words are made to terminate in *u*, *r*, as augur, winter, &c. A new vowel is introduced to express *a*, as in *mare*, distinct from that of *a* in man, although in reality the sound of the vowel is precisely the same. A part of the new characters, are taken from the alphabet which we published about six years since: but others are so slightly dissimilar to each other as to hardly be distinguishable. That a new system of orthography improved and simplified, is much needed, no one can hesitate to admit: but that the system now offered will succeed, with all its errors and imperfections, cannot be reasonably anticipated.

The Great Britian.

It appears, says the Mining Journal, that the statement announcing the abandonment of the directors of all intentions of saving this ill-fated steamer, was incorrect. By a report from Mr. Brunel on her present state, we learn, that except the parts actually damaged, the extent of which is comparatively small, the ship is perfectly sound, and as good as the hour when she struck. The principal injury is in her bottom, under her boilers and engines. The vessel has evidently been thumping on the rocks, and almost entirely on this part of the bottom, from the few first days after she grounded—and at present, in all probability, her whole weight is resting on this part; yet, nothwithstanding this she is perfectly straight and has not broken, or even sprung an inch in the whole length. The boilers have been up about 15 inches, and one of the condensers, about 8 inches, breaking the air pump. At present, this is nearly the extent of damage done—all of which could be easily repaired if the vessel were in dock. Mr. Brunel considers that there is no doubt that to get the vessel off is better policy than to break her up where she is, and that the main object is to protect her from the sea.

There is a spirited movement in progress for the extension of the Norwich and Worcester Railroad to New London.

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FOREIGN CORRESPONDENCE.

No. VI.

England, a land of extremes—Serfs compared with Slaves.

LONDON, Jan. 1847.

My dear Sci.—

England is gigantic in every thing. In wealth, in poverty, strength, weakness, beauty, filth, elevation, and degredation. She has what belongs to almost every old country, whose birth was in barbarism, the extremes of good and evil, and they are both gigantic. While the proud lord absorbs to himself thousands upon thousands of God's acres, and rolls in his splendid chariot, or lounges on his soft cushions, the peasant accepts a bare life pittance for his toil from sun to sun ; dwells in a hovel, and sleeps happily upon straw. Commercial princes, and cotton-lords emulate their older and more aristocratic neighbors of the soil, with a lavish of gold that dazzles even the romance of the past ; but the poor devils who oil the gudgeons, and feed the looms ; who scrape ship masts and delve into holds, at what peril and weariness no figures can estimate, they live, move and have a being, and that is about all. Let any man belonging to neither country, England nor America, pass through the length and breadth of both, and say which has the most wretched slaves. It may be said that I judge the down-trodden of this country with prejudices natural to an American, but I am confident that my worst judgment would fall infinitely short of statistics. I feel free to say here what I have said elsewhere, that in point of fact there are worse bonded slaves in England than with us How can it be otherwise when the lands of Great Britain are in the possession of a few thousand persons, and the larger share in the power of a few hundreds, while the money or commercial capital is centred in as many hundred thousand. There are estates belonging to lords, tenanting thousands of men, women and children, who are as verily slaves to their masters, as the negro of the pampas, or the old born thralls of the early Saxons,—whose hearths, bed and board, depend upon the absolute obedience and conformity to the master's will and pleasure. They are free in name, but slaves in every thing else. There is law for them, and " intelligent English juries," but they know better than to put themselves in any predicament that requires an appeal to law. They might obtain a verdict, and at the same time permission to leave their huts and cottages forever. By the very circumstances of their condition, they are the most degraded of all slaves, inasmuch as they bear the yoke and wear the bonds, while they have the credit of being free. What are all the tenants of the Duke of Newcastle, for instance, but serfs ? Can they set any price upon their labor, any bounds to their toil ? Can they say I will do this or that, whether it shall please my lord or no ? Can they have an opinion political or religious, more than slaves ? No ! My lord gives them the field to labor in ; my lord defines their wages ; my lord says go to or fro ; my lord's voice in the councils of State aud Church is theirs ! An English constituency upon a ducal estate, means a tenantry that does and ***must*** approve of my lord's nominees, or their living and doom is sealed. You have seen negro slaves in the South—real slaves by statute, whose masters, are obliged to feed and clothe, and in every way provide for them, in health and in sickness, youth and old age—be there famine or plenty—peace or war ; but you never saw such a devoted, cringing, servile, bowing and selt annihilating thing in the presence of his master, as a real European free-born serf. A man who has no statute right to the soil, nor legal claim upon his lord. A kind of intrusive mock-humanity that gropes and fawns for the privilege of walking by the road side erect, and is recompensed for his loss of right to speech and action, by the ***name*** of freeman. Where is the essential difference between the slave in name and fact, and the slave in fact only, who is thereby shut out from the ameliorating sympathies and prayers of mankind ? I thank God that we have none of the extremes of social condition belonging to England, more than I should, to hear that our negro slavery was to be abolished to-morrow and those extremes succeed it.—Slavery by statute is an evil to get at, it stands out bold and full, having the heart of all men set against it ; but the slavery of conditions, while it is not a matter of national shame, is left uncared for, unpitied, and may deepen and thicken as best suits the will of the strong and the willingness of the weak. The whole English Parliament, with a few exceptions, if analyzed, would show that the voice of the masses of English people has just as little to do with government as that of so many slaves. The House of Lords is composed of men born to their seats, Peers of the realm whether wise men or witlings, and their eldest sons and brothers by their nomination or consent, go to make up the great share of the Commons; so that in fact, the people have no voice at all, except to ratify the determinations of their masters. After the landed lords fill the Commons with their eldest sons and brothers, they distribute their younger sons and less prominent relations among the offices of the Army, and Navy, Church and State. The shrewd ones, it is said, supply the Army, Navy and State ; while the fools take to the Church.—Under a system of religious surveillance like the establishment in England, fools can eat up fat livings as readily as wise men, which is about all that is expected of them, and there are always able poor students enough, to preach and drudge by way of duplicate, for the crumbs that fall from the " living" table. Why, the poor peasants are not only without political and social liberty, but also religious. The Establishment guards the "errors of faith" among the tenants, as strictly as the lord keeps their franchise and personal freedom from the contamination of self action. I remember spending one Christmas day at Petersburgh, Virginia, where the slaves—yes, the very negro-slaves have three neat little churches, all of which I visited from curiosity, and they were filled with the gaudiest, jolliest, and evidently the most happily disposed religious congregations I had seen for a long time ; and they were allowed to sing, pray and shout after any fashion and creed that suited them best—no penetrating committee of churchmen nor watchful masters, asked whether they were Methodists or Baptists, or whether they were celebrating the Nativity or the Declaration of Independence. But here, let a little half-conscientious knot of dissenters congregate by themselves, and how quickly the remonstrance of the " Established" pastor, and interested master, comes thundering in upon them. A regular espionage is kept over each man's hearth and altar, and he knows the penalty of continued transgression, after a remonstrance. To be sure, there are wide exceptions, but I speak of an immense class, who are as ignorant as they are servile, and as stupid as their clog-boots. The church opinions of the tenant are as useful to the lord as the political, for Church and State prop each other by trick of patronage and oppression, like two huge pillars, set wide apart at the bottom, and pressing together at the top. The people either by neck or heels, hang compressed at the top, or lie under the bottoms of the pillars, while the lords of land and lords of wealth take all the free open space. Some may be disposed to ask, why don't the people, the peasants, tenants, and all the oppressed, cut clear and leave their homes. The answer is, there is no place, no occupation to fly to. The land, the wealth and all the means, are secured to a few, and the many must take what is offered them. There is no loop hole of retreat. They must fly the country to get rid of its conditions, and how are they to do this, even if they would consent to flee from their cradle and graves. They are slaves, and their condition is permanent, it is in accordance with the spirit and wish of their masters, the aristocracy, that they should remain down.—Their extreme serfship and poverty, heightens the splendor of the other extreme by contrast. Signs are, that a commercial aristocracy is springing up, which, having more money which is ***available*** means, than the landed proprietors, will break up the latter system, its entails and hereditary privileges, and thus revolutionize society. But if this were so, I believe the extremes of condition would still be worse. The money-aristocrat has ever been a greater tyrant than the landed lord. His sphere of action is in crowded cities, where his flocking serfs have fiercer competitions to battle with, and increased expense for every article of livelihood. The money-aristocrat prides himself upon the element that floated him into notice, and will lose no opportunity of increasing its store. He has no rest upon the honor of birth, nor dignity of titles, while the lord of the soil, counting upon these, pursues the temporary necessity of his serfs, with less rapacity than the other. Beside, the lords of the soil are not fools—while they behold this formidable foe to their power, stalking into place, they themselves turn to, court alliance with it, and become doubly tyrants. Of all sciences yet developed, that is profoundest and most needed, that will destroy the oppressions of one, and ameliorate the conditions of the other extreme of society. I feel keen regret and shame every day, that we are a nation holding slaves ; that my mouth must be comparatively sealed, where otherwise I might speak out to these vaunting philanthropists of the old world. But if we have cause for shame so have they—and English serfs have cause for indignation.

S. D. C.

Hints to Gas Consumers.

As gas obtained from coal or oil has now nearly superseded every other kind of artificial light for both public and domestic purposes, its proper management becomes a matter of great importance. In the first place, the greatest care should be taken to prevent the escape into the apartments in which it is used ; for as it forms, when mixed with common air, a highly explosive compound, resembling the fire-damp in coal-pits, both in constitution and properties, very dangerous accidents frequently happen from a neglect of this precaution. To this end the taps of the various burners, and especially of the main feed-pipe, should be turned so as to quite cut off all supply of gas. Should, however, the gas be found to have escaped, a light should never be introduced into the apartment until the *upper* sashes of the windows have been open some time, and every available way of exit provided for the dangerous mixture of gas and air then in the room. The next point claiming attention is the meter. To make our remarks on this subject the more intelligible, it may be proper to give a brief account of its construction. It consists of an external gas chamber, in which there is a rotating chambered cylinder properly connected with the register wheels. Into the chamber of this cylinder the gas is delivered by the outer feed-pipe to be measured by the burners. Projecting from the front of the main chamber is a smaller one, provided with two screw-taps, one for the admission of water, the other for its emission. Water is poured through the former into the external chamber, and finds its way into the cylinder-chambers, and, of course, rises to a height proportioned to the quantity poured into the apparatus. The second of the screw taps above mentioned is used to regulate the height, and must therefore, be withdrawn, whilst pouring in the water. The form of the chambers in the rotating cylinder is such that the pressure of the entering gas on the water causes the cylinder to go round. This rotation communicates motion to the wheels which register the number of rotations, and, of course, the volumes of gas delivered at each rotation into the chamber from which the burners are supplied.—Now, as the rotating cylinder is partially filled with water, it is obvious that its capacity for gas must depend on the height to which the water has risen in it. This capacity is estimated for each meter from a given height of water, and this is regulated by the emission screw tap, as just stated. If this is not withdrawn whilst pouring in the water, the capacity of the chambers will be diminished by the rise of the water, and more gas registered than has been consumed. On the other hand, should there be too little water consumed, the light, will be unsteady, and may suddenly go out altogether. We have thought it right to give these hints at the present time, as accidents are more likely to happen than at most others.

The U. S. Treasury.

The amount of receipts into the treasury of the United States for the quarter ending on the 31st of December last was $11,421,260.—The amount of disbursements, during the same period was $12,054,609,86.

TO CORRESPONDENTS.

We are aware that our correspondents are frequently disappointed because their favors are not noticed so early as they anticipate.—We therefore request that it be distinctly understood, that our notices and answers to correspondents, are made up on Monday, five days prior to the day of publication.

"D,"—is not entitled to answer, according to our rules, either by mail or otherwise.

"S. B. N."—Answered by mail.

"A. S. B. of A."—As your communication requires a full explanatory answer, we must defer till next week.

"A. G. of S."—To your inquiries "why two guns made of the same materials will not equally shoot with the same strength and why one will recoil more than another and why one will shoot the shot very close, and another scatter it very much, and both made with the same material, and bored with the same rod," we answer, 1st ; the force with which a ball is projected from a gun, depends in a measure on the simultaneous ignition of the several grains of powder employed, and this depends on the construction of the barrel. If the priming hole is the largest outside, perpendicular to the bore, and close to the breech-pin, the powder within the prime-hole will blow outward, and the charge is ignited at one corner and burns comparatively gradual :—a part of the grains being burned up before the other parts are ignited. But let the prime hole be largest at the bottom, an eighth of an inch forward of the breech pin, and inclined towards the centre of the charge, and when discharged the powder in the prime-hole will blow downward towards the centre of the charge and the whole of the powder will explode at the same time, projecting the ball with great force.

2d. The recoil of a gun is generally in proportion to the relative weight of the ball, and the force with which it is thrown. The clearest laws of natural philosophy establish the fact that the re-action is equal to the force of projection and no instance to the contrary can be produced. A gun sometimes recoils in consequence of being foul inside ; but in such case the ball is impeded in its progress till the whole powder is ignited, but is eventually thrown with extra force. If the gun is heavy, and the ball is light, the recoil is felt less sensibly, on account of the relative inertia.

3d. If the bore of the gun is uniform to the muzzle, and the powder is ignited uniformly, so as to press uniformly on the surface of the load, and the powder expends its force before the shot leaves the gun, the shot will move forward compactly without much scattering.—But if the bore is larger towards the muzzle, or if the irregular ignition of the powder, puts a part of the powder in motion before the whole is ignited, or if the charge is disproportionate to the length of the barrel, so as to blow upon the shot after it leaves the barrel, the shot will be scattered in its progress.

" Subscriber and Mechanic.,'—We are half inclined to refuse the informatien required by you, on account of the omission of your proper name But for the benefit of others, rather than yourself, we shall give full instructions in the art of polishing furniture, in our next.

" L. T. T. of T."—Your lock is both ingenious and novel, besides being very safe. We can furnish an elegant engraving thereof, of two column size, for the trifling sum of $4, and will furnish a description and insertion free of expense ; and you may have the engraving for future use. An engraving of a smaller size may be furnished for $2.

"A. R. D of B."—We think your invention is of great value, and should like permission to publish your description :—we shall write by mail.

"A. S. of W. H."—Your proposed plan for a water wheel, has been used for a wind wheel heretofore. It may be that we do not fully understand its construction, from your brief description : but if we do, it will be better for you to enjoy your own opinion of its merits, than to receive ours. A little experience in these matters may perhaps be useful.

"T. M. of B."—The true length of the connecting rod of a lever-beam engine, is the medium between the necessary length and an extreme, or inconvenient length ; and the posi-

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tion of the fly-wheel shaft, should be on a medium between a point directly under the end of the beam when horizontal, and a point directly under the end of the beam when at the extremity of its motion up or down; or rather, at a point one third as far from the first named point, as from the second. But there is no arbetrary rule to be observed in either case, and a considerable variation may be admitted without perceptible disadvantage.

"C. H. V. C."—We are not aware that the snow plough used on the Baltimore and Ohio Railroad, has any thing peculiar in its construction. The best snow plough we have seen, is that invented by Mr. J. A. Gregg of Derry N. H. and described in No. 52 of the 1st volume of this paper, a copy of which we can send you if you so require

"L. W. of C."—1st. The wind wheel to which you allude, has not been patented, nor is it known who was the first inventor of the curved sails. We claim the right of invention of that *peculiar* curve, represented in No. 12, and have an operating model thereof; but shall not attempt to prevent other people from using it at present. 2nd, The sails *may* be made of cloth, but that will not keep its place so well. 3rd. A wheel of the size you mention will work a horse power in a *stiff* breeze, but not in a moderate or ordinary breeze. 4th. It may be constructed so as to regulate itself, but would be much more complicated, and consequently, more difficult to keep in repair.

"H. L. B of W."—The square lifting pump is not patented,—at least, it has been in use 20 years or more; and is the most efficient pump yet found for raising large quantities of water. If you require a particular description with drawing, we shall furnish it by mail for $1,00. On the subject of brick machines, we know of none preferable to the Cincinnati machine, described in No. 17, and furnished by Culberston, McMillen & Co.

"D. G. S."—The cost of a model, specification and duplicate drawings of your invention, with cost $20 beside the patent fee of $30,—in all $50. We cannot attach much value to your last submitted plan.

"E. G. of P."—We commend your perseverance. Your *new* new waterwheel will be noticed in next number.

"J. H. C. of C."—Your machine is original and with a slight variation of proportions will succeed well. We have deferred noticing it under the head of 'New Inventions,' for the purpose of recommending an engraving. It would appear to advantage in an engraving which we would furnish for $3,00.

" E. W. of A," and " E. M. G. of C."—Unavoidably deferred, with a number of others, to next number.

A House set on Fire by Water.

On Sunday, the 24th ult., the house at East Dennis, occupied by Mr. David Farnsworth, was set on fire and narrowly escaped destruction, in consequence of a glass globe of water, containing two small fishes, having been hung up against a south window. The house having been shut up two or three days, Mr. F., on approaching, saw smoke issuing from the chimney. Five minutes elapsed before he got in, as he had to return to his father-in-law's for the key. On entering, he found one of the window curtains was burnt, and that a covered easy chair standing by the window was in flames. After extinguishing the fire, he ascertained the cause. The glass globe filled with water hung where the rays of the sun fell directly upon it, forming a lens, or burning glass, and a part of the curtain happening to be in the focus, was set on fire. Repeated experiments were afterwards made with the same slobe. When filled with water and exposed to the sun, paper placed in the focus was instantly ignited; but when the water was turned out, the same effect was not produced. If Mr. F.'s house had been destroyed, every body would have said that it was set on fire by an incendiary.

Virginia Weather.

A gentleman who writes from Abington Va. states that on the 8th of January, the thermometer indicated two degress below zero.—This was the day on which the extraordinary phenomenon occurred on Lake Ontario, and in such weather as the Virginians are not accustomed to experience.

Gen. Tom Thumb again.

We mentioned two weeks since that the great little general was expected. It is now announced that he left Liverpool on the 4th, and will be expected daily.

ADVERTISEMENTS.

☞ This paper circulates in every State in the Union, and is seen principally by mechanics and manufacturers. Hence it may be considered the best medium of advertising, for those who import or manufacture machinery, mechanics tools, or such wares and materials as are generally used by those classes. The few advertisements in this paper are regarded with much more attention than those in closely printed dailies.

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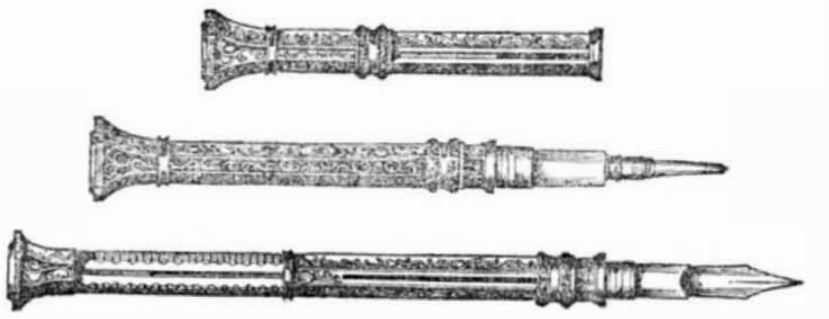

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CURIOUS ARTS

Ancient Egypt.

Prominent among the remarkable discoveries of the nineteenth ceutury, is that of the key to Egyptian hieroglyphics, and the consequent recovery of the historical records of a nation whose long day of civilized greatness, waning into twilight, while the poems of Homer were yet unsung, had passed into antiquity ere Greece had dispelled the gloom of her primeval barbarism—a nation which was receding from its climax of glory before the Exodus of Moses—whose stupendous pyramids had stood the silent wonder of more than a thousand years when Abraham went down into Egypt, and whose first king reigned at a period long anterior to the erroneous but commonly received date of Usher's Chronology of the Flood. The history of Egypt has, like her own mummies, lain entombed in the rock of oblivion, until dug out by modern explorers, who have unburied the records—the archives—the national documents, written on the monuments, tombs, and temples, in a lan guage unknown to Greeks or Romans, or to modern nations, antecedent to the publication of Champollion's " Memoir on Phonetic Hieroglyphics," in the year 1822.

In 1826, the French Government sent an expedition under Champollion, and the Tuscan government one under Rossellini, who jointly pursued their discoveries with great zeal and success, returning in 1828 to commence the publication of their discoveries, when in the following year Champollion died, leaving his grammar of the language unfinished. Rosellini was ten years publishing his voluminous works on the manners and customs of the Ancient Egyptians. The Prussian Government has also sent out a scientific expedition under Lepsius, who has been several years in Egypt, and who has a work in preparation in which he will exhibit the vast discoveries made by him among the tombs of Memphis, wherein he found numerous inscriptions, from which he will partially reconstruct, as it were, fragments of the history of the ancient race.

Among the individuals who have distinguished themselves by researches on their own account, and some of them at very great expense, are Col. Vyse and Sir Gardiner Wilkinson, of England, and Mr. Birch, of the British Museum ; Bunsen, Prussian Minister at London ; Prisse, a Frenchman, and Mr. Gliddon, formerly United States Consul at Cairo, who has resided in Egypt for twenty three years of his life, and is now lecturing on his favorite study in this country. To this catalogue the name of Dr. Morton, of Philadelphia, should be added.

The most interesting and important of the results attending these discoveries, is that relating to chronology and the Egyptian origin of much of the religion, the philosophy and civilization of the Jews, (for Moses was learned in all the wisdom of the Egyptians,) and through them of that of modern times. Our histories and schools have had no account of early Egypt, except the glimpses afforded in the biblical account of Abrahams visit to Egypt, and the sojourn of the Israelites, and their exodus under Moses. Many have attributed the building of the pyramids to the Jews, during their Egyptian bondage. But the researches of the disciples of Champollion have now fully established that the last of the sixty nine pyramids, now known to have existed, must have been built before Abraham, and the first at least a thousand or more propably fifteen hundred years prior to this period. Bunsen has placed the first king Menes at about 3500 years before Christ, but in doing this he struck through entire dynasties of kings, whose names, comparative position, and length of reign, Lepsius has since discovered. Consequent the short chronology of Bunsen must be extended. Though nothing definite is known, yet all the translators of the hieroglyphics are now agreed that the first king of Egypt must have reigned at least 4000 before Christ, and many place his reign at 5000 or 6000, and some have even gone beyond this period. At all events the Egyptians were the most ancient nation known in history, and the human race is much older than what has heretofore been supposed. Nor does this chronology conflict with the bible. The common date of the flood, 2348 years before Christ, does not belong to the bible, but to Archbishop Usher and the English parliament. We believe we speak the opinion of the best informed biblical scholars of the present day, when we say that no chronology can be determined from the bible prior to Abraham, with whose life the historical and chronological narrative of the Pentateuch commences.*

We learn too, that Pythagoras and Plato, who visited the land of the Nile, drew much of their philosophy from the Egyptians, while the Greek mythology was not original, as some have written, but was drawn from the same source It is indeed surprising to find how many ideas and customs the Egyptians held, which are in vogue, to the present day, and which form no unessential portion of the institutes of the Hebrews

Egypt has passed away, leaving her monuments and records to attest her high antiquity and former greatness. Her career must have extended over a period of from 4000 to 5000 years. Other nations, too, have arisen, flourished for a shorter period, and passed away, leaving but a shapeless mass of ruins to attest only that they had once been on earth. Egypt, Arabia, Assyria, Persia, Hindoo, China, Phoenicia, Italy, and North and South America, all proclaim that on their soil once existed powerful and civilized nations that have entirely died out, leaving no successors behind. Is this the fate of the human race? Is it destined to rise and fall like the waves of the sea in successive phases of barbarism and civilization to the end of time. Are the infancy of Modern Europe and America yet scarcely born, to follow the melancholy fate of the countries now buried in the tomb of nations ? Or has the soil been merely prepared, in which the future civilization of the race is to meet with no blight, and to grow until its branches reach the heavens, and the generations of man sit down beneath its, until the last trump shall sound, and time shall be no more.

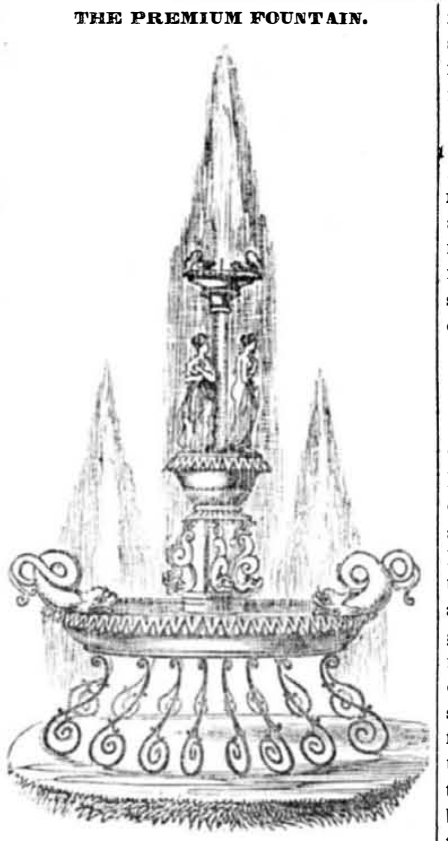
* On this subject, or rather branch of the subject, the writer, or rather lecturer, must have the honor of no small share of ignorance : the ages of the first born descendants of Adam, at the birth of the succeeding, down to Noah, being distinctly and expressly given, for the purpose of establishing the chronology of the first age of the world. And this is admitted by the " best informed biblical scholars," at the present day.

The Phosphorescence of the Sea.

In the " Voyage to Chili," by Dr. Poppig, there is a beautiful and instructive passage in relation to the phosphorescence of the sea, owing to the presence of minute animalcules. We copy it as follows :

" From the topmast the sea appeared, as far as the eye could reach, of a dark red color, and this in a streak the breadth of which was estimated at six English miles. As we sailed slowly along, we found that the color changed into brilliant purple, so that even the foam, which is seen at the stern of a ship under sail, was of a rose color. The sight was very striking, because this purple streak was marked by a very distinct line from the blue waters of the sea, a circumstance which we the more easily observed, because our course lay directly through the midst of this streak which extended from south-east to north-west. The water taken up in a bucket, appeared indeed quite transparent, but a faint tinge of purple was perceptible when a few drops were placed upon a piece of white china, and moved rapidly backwards and forwards in the sunshine.—A moderate magnifying glass showed that these little red dots, which only with great attention could be discerned with the naked eye, consisted of Infusaria, which were of a spherical form, entirely destitute of external organs of motion. We sailed for four hours, at a mean rate of six English miles an hour, through this streak, which was seven miles broad, before we reached the end of it, and its superficies must therefore have been about one hundred and sixty eight English square miles. If we add that these animals may have been equally distributed in the upper stratum of water, to the depth of six feet, we must confess that their numbers infinitely surpass the conception of the human understanding.

THE PREMIUM FOUNTAIN.



This pattern of a fancy fountain was among the first constructed by Mr. Farnum, the celebrated fountain builder of this city ; and so fully did the pattern meet the taste and approbation of the public that the inventor was awarded a diploma from the American Institute.

This fountain has a light and rather delicate appearance, and when made of moderate size and properly painted, makes an elegant and suitable ornament for a garden fountain ; and the requisite supply of water may easily be furnished without the aid of an elevated natural fountain or reservoir. Each genteel garden within or without this city should be furnished with a tasteful artificial fountain.

Commercial Value of the Microscope.

We lately had occasion to point out the advantages resulting from the study of the Microscope, even in a commercial point of view, as exemplified more particulaaly in the article on the fraud practised by dishonest leech dealers, an account of which we gave a few days ago. We have now to direct attention to the means for detecting the adulteration of musk by the aid of the microscope, and for which we are indebted to Dr. Neligan, the lecturer on Materia Medica in the Dublin Medical School. This gentleman states that, owing to the high price and great demand for musk, which, as is now generally very well known, is the secretion of the male musk animal, the *moschus moschiferus*, and that it is generally imported into the British market from China, in the natural bags of the animal, by the wholesale by London druggists, by whom it is retailed to the trade, many of them finding it very much adulterated, prefer purchasing the unopened bag; this precaution, however, is not often found a sufficient protection against fraud, as spurious musk bags are very common, and so well prepared by the ingenious Chinaman, that even the most experienced eye is often unable to distinguish the true from the false. It appears that the Chinese, finding a greater demand for musk than they are able to supply with the genuine article, squeeze out some of the secretion, which is fluid in its recent state, and mix it with, it is believed, the dried blood of the animal; this compound, which presents the same physical characters as true musk, they cut into small sacks, made of pieces of the skin cut off from other parts of the animal's body, and prepared with the usual ingenuity of this people, so much so, indeed, as almost to defy detection with the naked eye. The method hitherto adopted for detecting this sophistication, has been the peculiar position of the hairs, which are arranged in a circular manner around the genuine musk pod. The means which are now proposed to detect the fraud; depend upon the microscopic character of the hairs, which grow on the sac of the musk animal, and which differ very materially from those of the false sacs which are met with in commerce. On placing hairs from both under the microscope, it will be seen that those from the natural sac of the animal are furnished in the interior with distinct, regular color cells, while in hairs taken from other parts of the animal's body, the cells appear to be obliterated, as is generally the case in this and the allied tribes of animals. The method above proposed is a very simple one and of easy application, now that every pharmaceutist is supposed to be provided with a microscope, without which he could not possibly detect the adulteration of arrow-root, and of the other cuculas of commerce.—*London Critic.*

Submarine Railways.

Mr. De la Haye, after the reading of a paper "On Ancient and Modern Modes of Travelling," at the Liverpool Polytechnic Society, on Monday, in which he expatiated upon the advantages of railway transit, and expressed his belief that, by-and-by, a daily communication would be established between Chili, India and London by means of the electric telegraph, alluded to his invention of submarine railways. We have before given full details of Mr. De la Haye's plan, which is to construct an immense iron tube, to be lowered from above, and riveted together by means of the diving bell. When completed, rails are to be laid down, and locomotives, unaffected by external influences, are to career beneath the bosom of the deep. His theory is, that the violence of the most violent storms is not felt lower than twenty feet below the surface, and that the pressure of the water, together with the accumulation of sand, &c., would retain the tube in the position in which it may be placed.—*Liverpool Standard.*

THE NEW YORK

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